

Notice of Allowability	Application No.	Applicant(s)	
	10/024,574	SATTUR ET AL.	
	Examiner	Art Unit	
	Dr. Kailash C. Srivastava	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/24/2004.
2. ☒ The allowed claim(s) is/are 16-29.
3. ☒ The drawings filed on 21 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☒ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>032504</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Examiner's Amendment and Comment

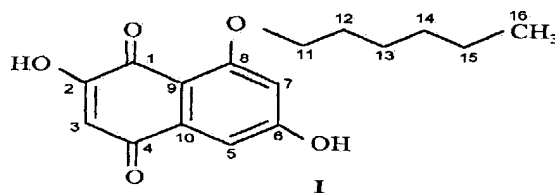
1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Larry Nixon on March 24, 2004.

IN THE CLAIMS

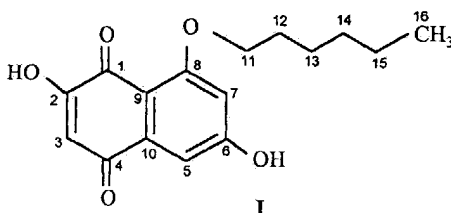
Claims 1-15 are cancelled. Claims 16 to 29 are added.

16. An aldose reductase inhibitor of the formula I or a pharmaceutically acceptable derivative thereof



17. An aldose reductase inhibitor of claim 16, wherein the derivative is an acid or base addition product.
18. A pharmaceutical preparation containing the compound of Claim 16 and one or more pharmaceutically acceptable excipients.

19. An aldose reductase inhibitor of claim 16, wherein said inhibitor is a rat lens aldose reductase inhibitor.
20. An aldose reductase inhibitor of claim 16, wherein the aldose reductase inhibitor of formula I is 2,6-dihydroxy-8-hexyloxy-1,4-naphthaquinone.
21. A process for the isolation of an aldose reductase inhibitor of the formula I



- comprising culturing *Aspergillus niger* CFR 1046 and isolating said aldose reductase inhibitor from the resulting fermentate.
22. A process as claimed in claim 21, wherein the aldose reductase inhibitor isolated from *Aspergillus niger* CFR 1046 is 2,6-dihydroxy-8-hexyloxy-1,4-naphthaquinone.
23. A process as claimed in claim 21, wherein the compound of formula I is isolated from fermentates of *Aspergillus niger* CFR 1046 by solvent extraction.
24. A process as claimed in claim 21, wherein the compound of formula I is isolated from fermentates of *Aspergillus niger* CFR 1046 by column chromatography.

25. A process as chimed in claim 21, wherein the compound of formula I is isolated from fermentates of *Aspergillus niger* CFR 1046 by crystallization.
 26. A process as chimed in claim 21, wherein the compound of formula I is isolated from fermentates of *Aspergillus niger* CFR 1046 from fermented potato dextrose broth using ethyl acetate solvent followed by column chromatography and crystallization.
 27. A process, wherein the compound of formula I according to Claim 16, isolated from fermentates of *Aspergillus niger* CFR 1046, is converted into a pharmaceutically acceptable derivative.
 28. A process as claimed in claim 27, wherein the pharmaceutically acceptable derivative comprises acid or base addition products of said compound.
 29. A process as claimed in claim 28, wherein the addition products contain hydrochloride, hydrobromide, sulfate, sodium, potassium, calcium and the like ions.
2. It is noted that the microorganism(s) (i.e., *Aspergillus niger* CFR 1046) required to practice the claimed invention are currently available from American Type Culture Collection.

It appears that the microorganism(s) should remain available to the public beyond the effective life of the patent. Any information to the contrary which comes to applicants' attention during the prosecution of this application must be inserted into the record or otherwise be brought to the attention of the Office by applicants.

The complete name and address of the depository should be inserted in the specification.

3. The following is Examiner's statement of reasons for allowance:

The closest prior art references are:

A. Boghosian, Robert A. and McGuinness, Eugene T. 1981. Pig Brain aldose reductase: A kinetic study ----. International J. Biochemistry, 13(8), pages 909-914.

B. Wittenveen, C.F.B. et al. 1989. L-arabinose and D-xylose catabolism in *Aspergillus niger*. J. General Microbiology, 135(8), Pages 2163 to 2171.

Cited prior art references are silent about an aldose reductase inhibitor having same structure as the compound instantly claimed. Therefore, the prior art references do not reasonably teach or even suggest a composition comprising said compound

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

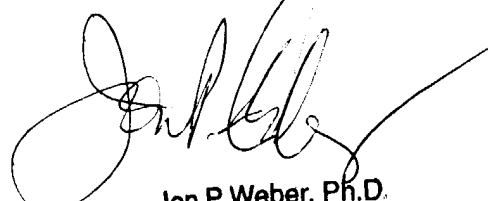
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (703) 605-1196. The examiner can normally be reached on Monday to Thursday from 7:30 A.M. to 6:00 P.M. (Eastern Standard or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743 Monday through Thursday. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Kailash C. Srivastava, Ph.D.
Patent Examiner
Art Unit 1651
(703) 605-1196

March 29, 2004



Jon P. Weber, Ph.D.
Primary Examiner